DISTRIBUTION OVERHEAD STANDARD

Overhead Construction

PART 1 – CURRENT CONSTRUCTIONS

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AUTHORISATIONS

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Review cycle	5 Years	

RESPONSIBILITIES

This document is the responsibility of the Asset Management Systems and Standards Team, Tasmanian Networks Pty Ltd, ABN 24 167 357 299 (hereafter referred to as "TasNetworks").

Please contact the Asset Management Systems and Standards Team with any queries or suggestions.

- Implementation All TasNetworks staff and contractors.
- Compliance All Group Managers.

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RECORD OF REVISION

The content of this manual was initially drawn from earlier TasNetworks legacy manuals and Aurora Energy manuals for overhead lines, LVABC and HVABC.

Section number	Date	Ver.	Details
ALL	July 2019	1.0	INITIAL ISSUE
ALL	Sept 2021	2.0	MAJOR RELEASE
0	Nov 2021	2.0	Updated Amendment Record
1	Nov 2021	2.0	Minor fixes to drawings
2	Nov 2021	2.0	Eliminated double-up, added LVABC paralleling bridging, FRP LV crossarms
3	Aug 2021	2.0	FRP HV crossarm & MS HVABC constructions added
4	Nov 2021	2.0	Added FRP crossarm, fixes & 66kV constructions
5	Nov 2021	2.0	SWER Recloser, fixes to NOJA reclosers
6	May 2021	2.0	Drawing corrections, Platform mounted transformers
7	Aug 2021	2.0	IBIS conductor added, MSHVABC parameters and fittings updated and added
8	July 2019	1.0	Original issue
9	May 2021	2.0	Minor mods
10	Nov 2021	2.0	Titan Poles added, Fuse/switch IDs on poles added, APL's for Titan Poles
11	May 2021	1.1	Original Issue
12	Nov 2021	1.1	Various fixes, changed all down-leads to min. 70mm2
13	Dec 2021	2.0	Amendments associated with FRP HV constructions, MS HVABC and Titan Poles. Various fixes.
14	Dec 2021	2.0	Minor mods – vegetation drawings.
0	July 2022	2.1	Update amendment record
10	July 2022	2.1	Titan Pole APL details
All	March 2024	2.1	OHCM broken into chapters to be published separately
5,9,10	March 2024	-	See chapter change record

SECTION 0 PREFACE

This Standard contains the approved construction process considerations and detailed standard arrangements for Overhead Distribution assets within the TasNetworks electrical network.

The information contained in this Introduction is intended to provide guidelines on the format, contents, and use of the Standard.

TasNetworks may update this standard for the purposes of design improvement and technology advances. It is the responsibility of the designer to ensure the latest TasNetworks' Standard is used for distribution design.

Scope

The Distribution Design Standard for Overhead Distribution applies to the following asset types:

- High voltage overhead lines, i.e. 22 kV, 11 kV and SWER
- Low voltage overhead lines
- Pole-mounted plant, e.g. transformers, switches, reclosers, regulators and fuses
- Communications cables on poles (e.g. optical fibres, NBN cables).

Overhead materials shall comply with TasNetworks' current periodic contract for distribution equipment and specifications.

For interconnections to other TasNetworks electrical reticulation refer to the following standards:

- Underground cable terminations on poles – for further detail refer to the Distribution Design Standard for Underground System
- Private installations - for further detail refer to the Distribution Design Standard for Planning
- Public Lighting Equipment – refer Public Lighting Construction Manual.

The application of this design standard applies for both greenfield and brownfield sites, where the HV and LV reticulation is intended to be overhead. All designs shall be compliant in full of this standard. All non-compliance's are required to receive prior approval from the Asset Management Systems and Standards team.

Change Process for this Standard

1. Overhead Standards will be reviewed and updated as needed with changes at a minimum every 6 months.
2. The release of updates to the Standards will be done in the months of March and September in conjunction with the Design Standard:
3. Change requests to Construction Standard will be sent to Asset Management Systems and Standards – all changes will be recorded in the change management register.
4. Change requests will be reviewed and assessed as to whether they are for:
    - Immediate consideration
    - Consideration in time for 6 monthly release

5. 1 month prior to the release time all “less urgent” change proposals will be considered and any changes to the likes drawings undertaken. A formal technical review forum will be held with the following attendees:
    - Field Engineering
    - Field Operations
    - Asset Management Systems and Standards
6. The impacts of any changes to the Construction Standard on the Design Standard will be considered in the review process.
7. In the 6 monthly review and immediate change requests consultation will be undertaken with:
    - Field Engineering
    - Field Operations – construction personnel
    - External contractors (as appropriate)
8. Asset Management Systems and Standards will endorse proposed changes to the Construction as a part of the review / update process nominally within 2 weeks.
9. Changes in material supply contracts will be entered into the change register and included in 6 monthly review particularly for:
    - Impacts on drawings to be considered when supply contract changes.
10. Drawing changes will be authorised by the Principal Engineer within Overhead Group.
11. The Asset Engineering leader will recommend to the Asset Management Systems and Standards Team Leader for the adoption of a new version.

Configuration Guides and Construction Practices

Several sections of this manual include a “Construction Practices” providing guidance not found in drawings. Those notes are provided for clarification where there a choice may exist between options.

Obsolete Constructions

A separate document titled Overhead Construction – Part 2 Obsolete Drawings has been created to store obsolete construction drawings, processes and detailed arrangements previously used in TasNetworks’ distribution network.

Obsolete drawings and components are moved from this Manual to Part 2 as they become obsolete so that this Manual does not continue to grow while ensuring that they remain accessible to personnel.

Where a whole drawing is not obsolete but includes obsolete parts (mainly in section 13) those drawing have the items marked as “Obsolete” and remain in this manual (Part 1).

Evolution of this manual

The Distribution Overhead Construction Manual was developed from the Legacy Distribution Overhead Design and Construction Standard which was used the Working Stress methodology for Distribution design. It incorporated the contents of the Distribution LVABC Design and Construction Standard (DS-D-OH-2) and the Distribution HVABC Design and Construction Standard (DS-D-OH-3).

The Legacy Standard was a re-release of the Aurora Energy Distribution Overhead Design and Construction Standard (DS-D-OH1) beginning the separation of design from construction aspects.

The design parts of the Legacy Standard were redeveloped to be AS/NZS 7000 compliant and incorporated Limit State Design and are found in the Distribution Overhead Design Standard. The construction parts of that standard form the basis of this manual.